

Claims

1. Apparatus for initiating staggered firing of first and second spark plugs in a dual plug internal combustion engine, comprising:
 - a control module for determining a dwell interval;
 - means including a first ignitor coupled to said control module for
 - 5 activating a first ignition coil associated with said first spark plug for said dwell interval to precipitate firing of said first spark plug;
 - delay control means responsive to an output of said control module for producing an activation control signal for a second ignition coil associated with said second spark plug, said activation control signal being time delayed with
 - 10 respect to the dwell interval determined by said control module; and
 - means including a second ignitor for activating said second ignition coil in accordance with the activation control signal produced by said delay control means to precipitate firing of said second spark plug that is time delayed with respect to the firing of said first spark plug.
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2. The apparatus of Claim 1, wherein said first ignitor is integrated into said control module, and said output of said control module is an output of said first ignitor.

3. The apparatus of Claim 2, wherein said delay control means comprises:
 - means for detecting the activation of said first ignition coil by said first ignitor; and
 - 5 means for producing an activation control signal that is delayed with respect to the detected activation of said first ignition coil, and for activating said second ignitor in accordance with said activation control signal.

4. The apparatus of Claim 1, further comprising:

means for adjusting the time delay of said delay control means so that the firing of said second spark plug is delayed with respect to the firing of said first spark plug by a calibrated angle of engine rotation.

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5. The apparatus of Claim 1, wherein said delay control means further comprises:

means for detecting an engine speed based on a firing frequency of said first spark plug; and

5 means for selecting the time delay of said activation control signal based on said detected engine speed.